

Appendix G - Management Indicator Species

Recommendations

The Huron-Manistee National Forests have identified and selected six Management Indicator Species: ruffed grouse, Kirtland's warbler, bald eagle, Karner blue butterfly, brook trout and mottled sculpin.

In general, the Forests followed Region 9 direction for selecting Management Indicator Species as outlined in Managing R9 Plan Revisions: 5. Revision Tools: Ecological. Management Indicator Species. The six Management Indicator Species were selected from an initial list of 30 potential Management Indicator Species. The initial list consisted of the 16 Management Indicator Species identified in the 1986 Forest Plan, as amended, plus additional species indicative of vegetation communities that would potentially be altered compositionally or in spatial extent by forest management activities. Each of the 30 potential Management Indicator Species was evaluated against the four criteria for "ideal" Management Indicator Species as provided in R9 direction. If any of the four criteria were not met a species was considered unsuitable as a Management Indicator Species.

The results of the 30 potential MIS species evaluated against "ideal" Management Indicator Species criteria are presented in Table G-1. Eight species met all four criteria, but two of these were determined to be unsuitable Management Indicator Species for reasons shown in Table G-2. As stated, the remaining six are Management Indicator Species for the Huron-Manistee National Forests.

Table G-1. Potential Management Indicator Species (MIS) Evaluated Against Four Criteria for Ideal MIS as Listed on the R9 Website.

If individual species failed to meet any of the criteria they were considered **unsuitable** as MIS. If all criteria were met the species was considered **potentially suitable**. Criteria are as follows: **Criterion I:** Habitat and population information was known and complete regarding habitat use, threats and limiting factors. **Criterion II:** Sampling protocols were in place sufficient to develop population estimates and trend information, and past and current data for the Forests exists. **Criterion III:** There is a well-documented cause and effect relationship from our management actions and changes in populations on our Forests. **Criterion IV:** The species played an important ecological role or changes in its population were known to represent changes in other species with similar habitat requirements.

Potential MIS	Criteria for "Ideal MIS"				MIS Suitability
	Criterion I	Criterion II	Criterion III	Criterion IV	
White-tailed deer	Yes	Yes	No	No	unsuitable
Ruffed grouse	Yes	Yes	Yes	Yes ¹	potentially suitable
Gray squirrel	Yes	No	No	No	unsuitable
Chestnut-sided warbler	Yes	No	Yes	Yes	unsuitable

Table G-1. Potential Management Indicator Species (MIS) Evaluated Against Four Criteria for Ideal MIS as Listed on the R9 Website (Continued).

Potential MIS	Criteria for "Ideal MIS"				MIS Suitability
	Criterion I	Criterion II	Criterion III	Criterion IV	
Black-throated green warbler	Yes	No	Yes	No	unsuitable
Lincoln's sparrow	Yes	No	Yes	Yes	unsuitable
Eastern bluebird	Yes	No	No	Yes	unsuitable
Pileated woodpecker	Yes	No	Yes	Yes	unsuitable
Ducks	Not specific enough in 1986 Forest Plan, as amended; proposed use of wood duck only.				
Kirtland's warbler	Yes	Yes	Yes	Yes	potentially suitable
Bald eagle	Yes	Yes	Yes	Yes	potentially suitable
Beaver	Yes	No	No	Yes	unsuitable
Brown trout ³	Yes	Yes	Yes	Yes	potentially suitable
Steelhead	Yes	No	No ²	Yes	unsuitable
Bluegill (or prey)	Yes	No	No	Yes	Unsuitable
Walleye (or predator)	Yes	No	No	Yes	unsuitable
Pitcher's thistle	Yes	Yes	Yes	Yes	potentially suitable
Black bear	Yes	No	No	No	unsuitable
Common loon	Yes	Yes	No	No	unsuitable
Wood duck	Yes	No	Yes	Yes	unsuitable
American bittern	Yes	No	Yes	Yes	unsuitable
Nashville warbler	Yes	No	Yes	Yes	unsuitable
Upland sandpiper	Yes	No	Yes	Yes	unsuitable
Indiana bat	Yes	No	No	Yes	unsuitable
Piping plover	Yes	Yes	Yes	Yes	potentially suitable
Karner blue butterfly	Yes	Yes	Yes	Yes	potentially suitable
Bobolink	Yes	No	Yes	Yes	unsuitable
June grass	No	No	No	Yes	unsuitable
Spotted knapweed	Yes	No	Yes	Yes	unsuitable
Blue cohosh	No	No	No	Yes	unsuitable
Mottled sculpin	Yes	Need baseline	Yes	Yes	potentially suitable
Brook trout	Yes	Yes	Yes	Yes	potentially suitable
Brown trout	Yes	Yes	Yes	Yes	potentially suitable

¹Represents early successional species.²Migratory species.³The 1986 Forest Plan, as amended, has brown trout and brook trout as MIS.

Table G-2. Final Decision of Management Indicator Species (MIS) Suitability and Rationale.

Potential MIS Species	Final MIS Suitability	Rationale
Ruffed grouse	Suitable	Species populations will indicate a large proportion of future vegetation management activities on the Forests.
Kirtland's warbler	Suitable	Species populations will indicate a large proportion of future vegetation management activities on the Forests.
Bald eagle	Suitable	Species populations will indicate mature habitat across the Forests.
Pitcher's thistle	Not Suitable	Habitat is very localized and of very limited spatial extent across the Forests.
Piping plover	Not Suitable	Habitat is very localized and of very limited spatial extent across the Forests.
Karner blue butterfly	Suitable	Species populations will indicate a large proportion of future vegetation management activities on the Forests.
Mottled sculpin	Suitable	Species represents aquatic habitats, has an adequate distribution across the Forests, and indicates the cumulative result of all management activities within the watershed.
Brook trout	Suitable	Species represents aquatic habitats, has an adequate distribution across the Forests, and indicates the cumulative result of all management activities within the watershed.